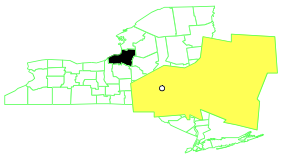
VOLNEY MUNICIPAL LANDFILL

NEW YORK

EPA ID# NYD980509376



EPA REGION 2

CONGRESSIONAL DIST. 24

Oswego County

Silk Road in Volney

Other Names:
Silk Road Landfill
Oswego Valley Sanitary Landfill

Site Description

The Volney Municipal Landfill is a closed, unlined, 85-acre, landfill located at the intersection of Silk Road and Howard Road in a rural area of the Town of Volney, Oswego County, New York. The Oswego Valley Solid Refuse Disposal District Board owned and operated the landfill from 1969 to 1975, when Oswego County (the current owner) acquired it. During its operation from 1969 to 1983, the landfill accepted wastes from homes, businesses, and light industry. However, from 1974 to 1975, the landfill accepted up to 8,000 barrels containing chemical residues from a local hazardous waste treatment facility and, of these, 50 to 200 barrels contained liquids of unknown volume and composition. Also, from 1976 to 1978, the landfill accepted an industrial sludge, which has since been identified as a Resource Conservation and Recovery Act (RCRA) hazardous waste. The County terminated disposal operations at the landfill in 1983 and finished closure of the site in 1985. Subsequent studies have shown that contaminants from the landfill have migrated into the ground water, surface water, and sediments in the areas surrounding the site. Currently, approximately 225 residents live within one mile of the site and use ground water from private wells. In addition, there are 25 households within 1,000 feet of the landfill, which also rely on ground water as their primary source of drinking water.

Site Responsibility: This site is being addressed through a combination of federal, state, and potentially responsible parties' actions

NPL LISTING HISTORY
Proposed Date: 10/01/84
Final Date: 06/01/86

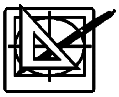
Threats and Contaminants

The ground water in the perimeter of the site contains volatile organic compounds (VOCs) (*i.e.*, benzene, toluene, chlorinated hydrocarbons) and heavy metals (*i.e.*, arsenic, barium, cadmium, chromium, mercury, and nickel). Leachate from the landfill has also been found to contain VOCs and heavy metals. Potential pathways of exposure to these contaminants include drinking contaminated ground water and surface water, as well as accidental ingestion of contaminated soil and sediments. Eating contaminated animals or fish could also pose a health threat. Hydrogeological conditions at the site make it possible for wastes in the deteriorating barrels and contaminants from the industrial sludges, as well as other chemicals disposed of in the landfill to contaminate ground water that serves as the drinking water supply for local residents. The streams and wetlands located adjacent to the landfill could also carry contaminants to more distant receptors.

Cleanup Approach

The site is being addressed in one long-term remedial phase focusing on controlling the source of contamination (source control) and the migration of contaminants from the site (contamination pathways).

Response Action Status



Source Control: Measures to close the landfill were initiated in 1979 and were finished by 1985. These included capping the landfill top with a plastic liner, capping the side slopes with compacted soil, installing a landfill gas collection system on the lined-top of the landfill, and installing a leachate collection system in the northern part of the site. From 1985 to 1987, a source control remedial investigation and feasibility study (RI/FS) was performed to determine the nature and extent of contamination emanating from the site and to evaluate remedial alternatives. EPA selected a remedy for the site in a 1987 Record of Decision (ROD), which required, among other things, construction of a supplemental cap (with a plastic liner) for the side slopes of the landfill; installation of a more extensive leachate collection system, with accompanying slurry walls; and treatment of the collected leachate, either by construction of an on-site leachate treatment plant or transportation of the leachate to an off-site treatment facility. EPA re-sampled the site in 1988 (to resolve an RI sampling problem) and, as a result, issued a Post-Decision Document (PDD) in 1989. The PDD reaffirmed the ROD remedy, but also called for a study to re-evaluate the cost-effectiveness of the slurry walls - as well as an accompanying decision regarding off-site versus on-site leachate treatment and disposal. At this same time, it was learned that a RCRA hazardous waste had been delivered to the landfill during 1976-78, which changed leachate treatment requirements and, therefore, the final design of the remedy. Subsequently, several unresolved hydrogeological concerns at the site also emerged, which also needed to be considered in the design of the remedy. To address these matters, two pre-RD studies were

performed between 1990 and 1997 that culminated in EPA issuing an Explanation of Significant Differences (ESD) in August 1997, modifying part of the remedy. In the ESD, EPA selected the final components of the remedy, which included supplemental capping of the landfill side slopes (as before), intermittent ground water extraction on an as-needed-basis (*i.e.*, in place of the leachate collection system and slurry wall installation), continued leachate collection from the existing leachate collection system, off-site leachate treatment and disposal, and long-term ground water monitoring. Negotiations with 40 Potentially Responsible Parties (PRPs) for the performance of the source control remedial design/remedial action (RD/RA) resulted in the PRPs signing a Consent Decree in May 1998. The RD began shortly thereafter, and was completed in September 1999. The source control RA commenced in the Summer of 2000 and was completed in September 2001. At that time, the extraction of contaminated ground water commenced. After several months of operation, due to operational problems, a replacement extraction well and associated piping were deemed necessary. This work was recently completed.

Entire Site: A contamination pathways investigation to evaluate off-site contaminant migration had been initiated in 1990, but was placed on-hold pending the completion of the source control pre-remedial design studies. The investigation was reactivated during 1998 (at the same time as the initiation of the source control RD) and was expanded to evaluate the extent of natural attenuation conditions in the environs around the site and the fate of migrating contaminants. The field work was completed in 2000, and a Contamination Pathways Investigation Report was issued in November 2001. Based upon the results of the investigation, it was determined that intermittent ground water extraction and treatment, in combination with natural attenuation, will adequately address site-related groundwater contamination in off-site areas and a supplemental ground water remedy was not necessary. It was also determined that the levels of contaminants that are present in the surface water and sediments around the site do not pose a public health threat and do not require remediation. An ESD was issued in October 2001, incorporating the monitoring of off-site wells into the source control long-term groundwater monitoring and extraction contingency plan. Also in accordance with the ESD, institutional controls are currently being established for the landfill and properties adjacent to the landfill to protect the integrity of the cap and to prevent the installation of drinking water wells until ground water standards are met.

Site Facts: In May 1979, the State of New York entered into an Administrative Order on Consent (AOC) with Oswego County that required ground-water monitoring, leachate disposal evaluation, and the development of a landfill closure plan. Closure of the landfill was finished in 1985. A Superfund-financed RI/FS was conducted from 1985-87, which was followed by the 1987 ROD and 1989 PDD. EPA and the PRPs signed an AOC in September 1990 for the conduct of the Contamination Pathways investigation and in June 1993, EPA and the PRPs signed an AOC for the conduct of a supplemental pre-RD study. With the completion of this latter study, a Consent Decree for the performance of the source control RD/RA was signed by the PRPs in May 1998. The Consent Decree also included the reimbursement of EPA's past remedial costs.

Cleanup Progress  ***(Threat Mitigated by Physical Clean-Up Work)***

The landfill has been fenced and capped with a liner on the top and, most recently, on the sides (i.e., NYSDEC Part 360), thus reducing the potential for direct contact with the waste materials. Surface water controls were also recently upgraded. The completed cap will reduce leachate generation from the site by over 99%. Leachate will continue to be collected from the downloading of moisture from the

waste, but will diminish with time. To date, approximately 2-1/2 million gallons of leachate have been collected and disposed of at an off-site treatment and disposal facility. In addition, groundwater extraction was recently commenced at the site, using both portable and permanent installations, and the collected groundwater was mixed with and will be disposed of with the leachate.

Site Repositories

Fulton Public Library, 160 South First Street, Fulton, NY 13069

EPA Region II Superfund Records Center, 290 Broadway, 18th Floor, New York, NY 10007-1866